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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,102	12/18/2001	Alan W. Peters	W9003-04	4840

7590 02/07/2005

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EXAMINER

GRIFFIN, WALTER DEAN

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 02/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Supp.
Notice of Allowability

Application No.

10/022,102

Examiner

Walter D. Griffin

Applicant(s)

PETERS ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on December 22, 2004.
2. ☒ The allowed claim(s) is/are 1,3-6 and 10-18.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Beverly Artale on February 2, 2005.

The application has been amended as follows:

Amendment to the Claims:

Please amend the claims as follows:

1. (Currently Amended): A composition suitable for use in a fluidized catalytic cracking (FCC) process, said composition comprising a component which contains (i) an acidic oxide support containing at least 50 weight percent of alumina, (ii) about 1-10 parts by weight, measured as the metal oxide, of at least one alkaline earth metal, (iii) at least 1 part by weight of a ceria containing transition metal oxide having oxygen storage capability, and (iv) at least 0.01 parts by weight palladium, all of said parts by weight being per 100 parts by weight of said acidic oxide support, wherein said composition promotes CO combustion while simultaneously reducing NO_x emissions in an FCC process.
2. (Cancelled)
3. (Previously Presented): The composition of claim 1 wherein said acidic oxide support is selected from the group consisting of alumina, silica alumina, and lanthana alumina.
4. (Previously Presented): The composition of claim 3 wherein said acidic oxide support is a silica alumina.
5. (Original): The composition of claim 4 wherein said silica alumina has an alumina:silica mole ratio of about 3-50:1.
6. (Currently Amended): The composition of claim 1 wherein said oxygen storage transition metal oxide ~~contains~~ consists essentially of ceria.
7. (Cancelled)
8. (Cancelled)
9. (Cancelled)

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10. (Previously Presented): The composition of claim 1 wherein said component contains about 2 to 50 parts by weight of said oxygen storage oxide per 100 parts by weight of said acidic oxide support material.
11. (Original): The composition of claim 1 wherein said component contains about 0.01-5 parts by weight of palladium per 100 parts by weight of said acidic oxide support material.
12. (Original): The composition of claim 1 wherein said component consists essentially of constituents (i) – (iv).
13. (Original): The composition of claim 12 wherein said composition consists essentially of said component and said composition is in the form of particles.
14. (Currently Amended): A fluid cracking catalyst comprising (a) a cracking component suitable for use in cracking hydrocarbons, and (b) a component which promotes CO combustion while simultaneously reducing NO_x emissions in an FCC process and comprises (i) an acidic oxide support containing at least 50 weight percent of alumina, (ii) about 1-10 parts by weight, measured as the metal oxide, of at least one alkaline earth metal, (iii) at least 1 part by weight of a ceria containing transition metal oxide having oxygen storage capability, and (iv) at least 0.01 parts by weight palladium, all of said parts by weight being per 100 parts by weight of said acidic oxide support.
15. (Original): The cracking catalyst of claim 14 wherein said cracking catalyst comprises an admixture of component (a) in particulate form and component (b) in particulate form.
16. (Original): The cracking catalyst of claim 14 wherein said cracking catalyst is a particulate composition comprising integral particles which contain both components (a) and (b).

17. (Currently amended): A method of cracking a hydrocarbon feedstock into lower molecular weight components, said method comprising contacting said hydrocarbons with a cracking catalyst comprising (a) a cracking component suitable for use in cracking hydrocarbons, and (b) a component which promotes CO combustion while simultaneously reducing NO_x emissions in an FCC process and comprises (i) an acidic oxide support containing at least 50 weight percent of alumina, (ii) about 1-10 parts by weight measured as the metal oxide, of at least one alkaline earth metal, (iii) at least 1 part by weight of a ceria containing transition metal oxide having oxygen storage capability, and (iv) at least 0.01 parts by weight palladium, all of said parts by weight being per 100 parts by weight of said acidic oxide support, at elevated temperature whereby said lower molecular weight components are formed.
18. (Original): The method of claim 17 wherein said catalyst is fluidized during said contacting and said method further comprises recovering used cracking catalyst from said contacting step and treating said used catalyst under conditions suitable to regenerate said catalyst.

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Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter D. Griffin whose telephone number is (571) 272-1447. The examiner can normally be reached on Monday-Friday 6:30 to 4:00 with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Walter D. Griffin
Primary Examiner
Art Unit 1764

WG
February 2, 2005


Glenn Caldarola
Supervisory Patent Examiner
Technology Center 1700